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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,223	03/18/2002	Georg Heinrich Grosch	IN-12122	9964

7590
Basf Corporation
1609 Biddle Avenue
Wyandotte, MI 48192

01/20/2004

EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,223

Applicant(s)

GROSCH ET AL.

Examiner

Rabon, Sergeant

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s), _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within line 3 of claim 2, the language, "at least two of the of the alkylene oxides", is improper.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Hartman ('854) and WO 97/27236.

Hartman discloses that the use of a polyoxyalkylene polyol having a high oxyethylene content internal block, capped with oxypropylene blocks, within polyurethane foams yields foams having good air flow and improved load bearing properties. See abstract and column 1. WO 97/27236 teaches at page 14 that polyurethane foams produced from multimetal cyanide

catalyzed polyoxyalkylene polyols having a high content oxypropylene internal block have problems with shrinkage. Therefore, the prior art is considered to teach the desirability of using a polyoxyalkylene polyol having a high oxyethylene content internal block, which is capped with oxypropylene blocks, for producing polyurethanes. Additionally, WO 97/27236 teach at pages 5 and 6 that a primary benefit of using a multimetal cyanide catalyst for producing oxypropylene containing polyols is that the resulting polyols have a low degree of unsaturation and resulting monofunctionality. These properties are considered to be beneficial in the production of polymers due to the reduced levels of chain termination they yield.

4. However, WO 97/27236 further teaches at page 15 that when multimetal cyanide catalysts are used within high ethylene oxide content polyether yielding polymerizations, the resulting polyethers will have poor properties. If such high levels of ethylene oxide are to be used, the reference recommends that basic catalysts be used. Though the passage at page 15 of WO 97/27236 pertains to the production of oxyethylene caps, one would have reasonably expected that inferior polyethers will result any time multimetal cyanide catalysts are used with high levels of ethylene oxide. Furthermore, this teaching is considered to render obvious the use of oxyethylene end caps (claims 4, 5, and 8), when higher primary hydroxyl content (higher reactivity) is desired.

5. Therefore, in view of the teaching regarding the desirability of using polyethers having high oxyethylene content internal blocks and the teaching regarding the advantages of using multimetal cyanide catalysts with propylene oxide, as well as the teaching regarding the disadvantages of using multimetal cyanide catalysts with ethylene oxide, the position is taken that one of ordinary skill in the art would have been motivated to produce a polyether polyol by

using a basic catalyst to polymerize an internal high content oxyethylene block and subsequently using a multimetal cyanide catalyst to polymerize capping oxypropylene blocks, having low unsaturation and increased functionality, so as to arrive at the instant invention.

6. The examiner has considered applicants' arguments; however, applicants have failed to clearly address the examiner's fundamental position that the combination of the references serve to teach the desirability of using a multimetal cyanide catalyst for the polymerization of propylene oxide to produce oxypropylene blocks within the polyether and the undesirability of using a multimetal cyanide catalyst when high contents of ethylene oxide are polymerized to produce an oxyethylene block. While the primary reference has been relied upon to teach the basic structure of the polyether polyol, the secondary reference has been relied upon to teach the desirability and advantages of using multimetal cyanide catalysts and basic catalysts, depending on the alkylene oxide to be polymerized. Additionally, applicants have argued that Hartman does not disclose a heteric block having the low ethylene oxide content of the present invention. In response, it is not seen that the instant claims are so limited; a low ethylene oxide content heteric block is not required by the claims, and it is not clear what heteric block is being referred to. Lastly, applicants state that the independent claims, as amended, include several limitations neither found in nor made obvious by the references. In response, applicants have not elaborated on these limitations; an examiner's review of the claims finds no limitations which have not been considered and which are not encompassed by the relied upon art.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent

January 10, 2004


RABON SERGENT
PRIMARY EXAMINER